

REMARKS/ARGUMENTS

This Amendment is submitted in response to the **non-final** Office Action dated April 18, 2008.

I. Introduction

Claim 7 has been amended. No new matter has been introduced.

Claims 8 and 9 have been cancelled without prejudice. Claims 1, 2, 13, and 14 have been previously canceled. Accordingly claims 3-7, 10-12, and 15-17 are now pending.

The Examiner rejected claims 1-4 and 13-16 as being anticipated under 35 U.S.C. §102(e) by U.S. Patent Publication No. 2004/0184483 A1 to Okamura et al. (hereinafter "the Okamura et al. publication").

In addition the Examiner rejected claims 5 and 17 under 35 U.S.C. §103(a) over the Okamura et al. publication in view of U.S. Patent No. 5,898,673 to Riggan et al. (hereinafter "the Riggan et al. patent").

In addition the Examiner rejected claim 6 under 35 U.S.C. §103(a) over the Okamura et al. publication and the Riggan et al. patent further in view of U.S. Patent Publication No. 2003/0152028 A1 to Raisanen et al. (hereinafter "the Raisanen et al. publication").

In addition the Examiner rejected claims 7-12 under 35 U.S.C. §103(a) under the Okamura et al. publication further in view of U.S. Patent Publication No. 2005/0021804 A1 to Hameleers et al. (hereinafter "the Hameleers et al. publication").

As will be discussed below, none of the pending claims, as amended, are anticipated or rendered obvious by the applied references.

II. Claims 3, 4, 15, and 16 are Patentable

The Examiner rejected claims 3, 4, 15, and 16 as being anticipated under 35 U.S.C. §102(e) by the Okamura et al. publication.

Claim 3 recites the following features (emphasis added):

operating the control node to generate the link bandwidth utilization information corresponding to said second link from an estimate of bandwidth that will be used on said second link by services over which said control node does not have admission control

The Examiner states in No. 1 of the Office Action that "unit 15 calculates a load balancing process on the basis of the statistical information collected by the network control device 10 ... [0185] lines 3-9" and "the load balancing control unit 15 calculates a load state of the path set within the network at the present". However, this does not describe "*an estimate of bandwidth that will be used*".

From the Okamura et al. publication, [0200] (emphasis added): "The statistical information collecting unit 11 accesses each of the routers within the network at the interval of the predetermined period". Then, "At this time, the statistical information collecting unit 11 acquires the information retained by the routers for the bandwidth (Wg) actually used for the GS flow and for the bandwidth (Wb) actually used for the BES flow."

It can be seen that this process is not "an estimate of bandwidth", or of "bandwidth that will be used".

The Examiner goes on to state on p. 17 of the Office Action that (emphasis added):

" 'the network information database 12 is stored with respective pieces of bandwidth information of the link's physical bandwidth (WL), the bandwidth reserved for the GS flow (WG), the bandwidth reserved for the BES flow (WB), the bandwidth actually used for the GS flow (Wg), and the bandwidth actually used for the BES flow (Wb)' ([0141] lines 3-9). This shows that information regarding reserved bandwidth that **can be used** is stored. Therefore, Okamura does disclose an **estimate of bandwidth that will be used.**"

Applicant respectfully disagrees that "bandwidth that can be used" teaches or suggests "estimate of bandwidth that will be used". WL, WG, WB, Wg, and Wb are all defined, knowable, ascertainable, distinct values. **None are estimates.** Therefore, the Okamura et al. publication does not render claim 3 unpatentable.

Further, the Okamura et al. publication does not teach or suggest "an estimate of bandwidth that will be used on said second link by services **over which said control node does not have admission control**" (emphasis added). The Okamura et al. publication deals with two information flows: "quality guaranteed flow" and "quality non-guaranteed flow" [0061] lines 2-4. The route control unit of the Okamura et al. publication clearly has "admission control" over both flows.

For example:

"Fig. 12 is a function block diagram of the load balancing control unit 15 of the network control device 10. The load balancing control unit 15 calculates allocations of individual flows to the plurality of routes. At this time, the load balancing control unit 15 calculates a load balancing process on the basis of the

statistical information collected by the network control device 10 or the request bandwidth information stored on the network information database 12 by the user request processing unit 13" [0185] lines 1-9.

Also,

"GS executes the searching process as to whether or not there is the route that meets the quality with respect to the notified quality parameter (S104)" [0213] lines 1-4.

Further,

"In a case where the route that meets the user request is discovered as a result of the route search by the route control unit 14, the route information is transferred to the router control unit 16" [0213] lines 11-15.

Finally,

"While on the other hand, in a case where the route that meets the user request is not discovered as the result of the route search by the route control unit 14, the route control unit 14 notifies the user request processing unit 13 that the route search resulted in being unsuccessful for the user request processing unit 13 (S105)" [0214] lines 1-6.

It is clear from the above that the route control unit of the Okamura et al. publication has "admission control" of both types of traffic on all of the links under the control of the route control unit. For this additional reason, the Okamura et al. publication does not render claim 3 unpatentable.

For at least the above reasons, claim 3 is patentable over the Okamura et al. publication.

Claim 15 has the feature:

from an estimate of bandwidth that will be used on said second link

For the reasons stated above regarding claim 3, claim 15, as amended, is patentable over the Okamura et al. publication.

For at least the reason that claim 4 depends from allowable claim 3, claim 4 is patentable over the cited art.

As claim 16 depends from allowable claim 15, claim 16 is patentable over the cited art.

III. Claims 5 and 17 are Patentable

The Examiner rejected claims 5 and 17 under 35 U.S.C. §103(a) over the Okamura et al. publication in view of the Riggan et al. patent.

Claim 5 recites the following features (emphasis added):

*where said link bandwidth utilization information corresponding to said second link is further generated as a function of the **physical link capacity of links used to couple** Internet service users to said second link*

The Examiner states on p. 5 of the Office Action:

Nevertheless, Riggan et al. teaches 'if the signal from the network management system 206 indicates that the QoS threshold is exceeded, then at least a first portion of the data, e.g., excess cells, are routed to node 300b via one or more of the secondary networks 212a-212c.'

The Examiner goes on to state:

"it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Okamura et al.'s invention to carry best effort Internet traffic over the second link because 'a quality of service (QoS) traffic contract bandwidth limit and a corresponding QoS threshold' can be established (Riggan et al. column 4, lines 36-37)."

There are two problems with this analysis. First, the Riggan et al. patent does not utilize "physical link capacity", it uses QoS thresholds to determine capacity issues.

Second, there is no teaching or suggestion in the Riggan et al. patent of "the physical link capacity of **links used to couple** Internet service users to said **second link**" (emphasis added). There is no teaching or suggestion in the Riggan et al. patent of looking at link capacity (or even QoS thresholds) on one link to use for link bandwidth utilization information on another link.

The Examiner states on p. 18 of the Office Action that

"Okamura discloses 'When an average bandwidth per BES flow can be predicted, for instance, in the case of the network where a main application of BES can be specified, a bandwidth required for BES can be calculated from the number of BES flows and from characteristics of the application' ([0110] lines 5-10)."

First, there is no mention in the cited passage of "Internet service".

Second, there is no discussion of "physical link capacity", just a predicted bandwidth of BES flow.

Third, there is no suggestion in the cited passage of any attributes of "links used to couple Internet

service users to said second link". The references in the Okamura et al. publication are to the link in question, not "other links used to couple" to the link in question.

For at least these reasons, and because claim 5 depends from allowable claims 3 and 4, **claim 5 is patentable over the cited art.**

Claim 17 recites the feature:

said link bandwidth utilization information corresponding to said second link is further generated as a function of the physical link capacity of links used to couple Internet service users to said second link

For the above reasons, and because claim 17 depends from allowable claims 15 and 16, **claim 17 is patentable over the cited art.**

IV. Claim 6 is Patentable

The Examiner rejected claim 6 under 35 U.S.C. §103(a) over the Okamura et al. publication and the Riggan et al. patent further in view of the Raisanen et al. publication.

Claim 6 recites the feature:

wherein said control node generates a control message to reduce the amount of bandwidth allocated to best effort traffic on one of said first, second and third links, when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available

due to best effort traffic on said one of said first, second and third links.

The Examiner acknowledges on p. 6 of the Office Action that:

"Okamura et al. and Riggan et al. fails to specifically disclose said control node generates a control message to reduce the amount of bandwidth allocated to best effort traffic on one of said first, second and third links, when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available due to best effort traffic on said one of said first, second and third links, as claimed."

The Examiner goes on to state:

"Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to reduce the amount of bandwidth to best effort traffic on one of the first, second and third links if a service requiring a guaranteed amount of bandwidth is not available because this would accommodate when 'measurements show that the QoS situation in the IP network suddenly deteriorates (for example, the delay increases)' (Raisanen et al. [0060] lines 1-2)."

If the Raisanen et al. publication shows limiting best-effort traffic, it does so in response to "the QoS situation in the IP network suddenly deteriorates". This does not teach or suggest doing so "when a service request for a service requiring a guaranteed amount of bandwidth on said one of said first, second and third links is received and said guaranteed amount of bandwidth is not available".

Further, the Okamura et al. publication describes finding routes for requested traffic, not limiting existing traffic in order to accommodate requested traffic. Therefore, there would be no reason to look to the Raisanen et al. publication for guidance on how to do so.

The Examiner apparently argues on p. 18 of the Office Action that the Raisanen et al. publication does show "a service request where the guaranteed amount of bandwidth is not available". Even if this is true, there is no teaching or suggestion in the Raisanen et al. publication of "generating a control message to reduce the amount of bandwidth allocated to best effort traffic on one of said first, second and third links" in response to such a situation. Instead, it refuses the request ([0064] lines 4-17).

For at least these reasons, and because claim 6 depends from allowable claims 3, 4, and 5, **claim 6 is patentable over the cited art.**

V. Claims 7, as amended, is Patentable

The Examiner rejected claim 7 under 35 U.S.C. §103(a) under the Okamura et al. publication further in view of the Hameleers et al. publication.

Claim 7, as amended, recites the following features (emphasis added):

*when it is determined that said user to whom said service request corresponds is using other services which can be terminated to provide the bandwidth required to satisfy said service request, **notifying the user of the insufficient***

bandwidth and presenting the user with the option of terminating the services being provided to said user which can be used to provide the bandwidth required to satisfy the service request.

The Examiner states in No. 9 of the Office Action:

"However, Okamura et al. fails to specifically disclose that determining if a user to whom said service request corresponds is using other services which can be terminated to provide the bandwidth required to satisfy said service request, as claimed."

The Examiner goes on to state (emphasis added):

"Nevertheless, Hameleers et al. teaches 'determines that the available bandwidth of 14.4 kbps is not enough to carry both the audio and video stream, and in the example of FIG. 4b, the procedure implemented in control procedure 10 is such that **the application decides to close one or more of the media streams, e.g. the video stream**' (Hameleers et al. [0060] lines 6-11)."

First, unlike claim 7, the Hameleers et al. publication discloses that "the application decides to close one or more of the media streams", not **the user**.

Second, the Hameleers et al. publication does not teach or suggest "notifying the user of the insufficient bandwidth". It simply reacts to "a change in the available bandwidth" ([0058] lines 1-2) by following the user's "control procedure" ([0061] line 6) which was pre-established by the user.

Third, the Hameleers et al. publication does not teach or suggest "presenting the user with the option of terminating the services being provided"; it follows the user' pre-defined "control procedures" [0061] line 6.

For at least these reasons, **claim 7 is patentable over the cited art.**

VI. Claims 10-12 are Patentable

Claim 10 recites the features:

presenting the user with the option of terminating the services being provided to said user which can be used to provide the bandwidth required to satisfy the service request

and

operating the control node to receive a reply from said user indicating a desire to terminate services or not to terminate services

The Examiner on p. 15 of the Office Action quotes from the Hameleers et al. publication at [0061] lines 5-9: "the user should have the possibility of setting the control procedure such that certain media streams are preferably dropped or preferably re-added, in accordance with the decrease or increase in available bandwidth".

This is clearly very different from the above listed features of claim 10, and further as argued above in relation to claim 7.

For these reasons, claim 10 is patentable over the cited references.

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For at least the reason that claims 11-12 depend from allowable claim 10, **claims 11-12 are patentable over the cited art.**

VII. Conclusion


In view of the foregoing amendments and remarks, it is respectfully submitted that the pending claims are in condition for allowance. Accordingly, it is requested that the Examiner pass this application to issue.

If there are any outstanding issues which need to be resolved to place the application in condition for allowance **the Examiner is requested to call (732-542-9070) and schedule an interview with Applicant's undersigned representative.** To the extent necessary, a petition for extension of time under 37 C.F.R. 1.136 is hereby made and any required fee in regard to the extension or this amendment is authorized to be charged to the deposit account of Straub & Pokotylo, deposit account number 50-1049.

None of the statements or discussion made herein are intended to be an admission that any of the applied references are prior art to the present application and Applicants preserve the right to establish that one or more of the applied references are not prior art.

Respectfully submitted,

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